Laboratory Certification For

Geo Scientific Material Testing Laboratory (GSMTL)

Lab ID: LCP-019

Issue date: Jan 31st, 2018
Expiry date: Oct 30th, 2018

This extension letter confirms an additional 9-month certification for GSMTL, which is located at Opposite North Gate of Ghazi High School, Kart-e-Char, Kabul, Afghanistan. This laboratory should now be considered as **certified for a period of 9-months** from the date of this letter. This laboratory is considered certified for use by the US Army Corps of Engineers Transatlantic Afghanistan District (USACE TAA) and other clients, for all tests listed in Table 1 to Table 7, as attached to this letter. **Please note, Direct Shear Testing and Percolation Testing are not permitted under this 9-month Certification.** This certification will be included with records that are maintained at the ABA and USACE TAA Headquarters in Bagram Airbase, Afghanistan. Retaining the certification will require yearly inspections by the ABA. This certification is also contingent upon the following conditions:

A. Continued employment of the below individual while without his oversight, the laboratory will require recertification:
    a. Mr. Sardar Khan the laboratory manager;
B. If the calibration certificates of equipment expire or become invalid as per the relevant standard;
C. If the laboratory is moved to a new location, it will require recertification; and
D. If the laboratory fails to comply by the approved lab quality management plan, safety standards, and other criteria set forth in the most up-to-date ABA lab certification manual, the lab certification may be suspended.

For verification and good standing of this certification please check our online directory of laboratories at http://aba.af/lcp_directory.php. The inspection and certification process for the GSMTL adhered to procedures outlined by the Materials Testing Center (MTC), which is located at the Geotechnical and Structures Laboratory (GSL), U.S. Army Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi, USA. The MTC is the USACE-authorized agency for certifying laboratories for use in quality control testing for USACE construction projects. To facilitate construction in Afghanistan, the USACE TAA has authorized the ABA to conduct laboratory certifications with strict adherence to MTC protocol. Qualifications of the authors for conducting these certifications include: 12 years of laboratory experience, 12 years of teaching classes on construction materials, and six years of teaching university-level construction classes.

Certified to perform 85 tests, as shown on attached sheets and summarized as:
Table 1: 15
Table 2: 13
Table 3: 21
Table 4: 21
Table 5: 5
Table 6: 3
Table 7: 7

Regards,

Mowdood Popal

President of Afghanistan Builders Association (ABA)

GSMTL Certified Laboratory Tests

Table 1. List of Certified Soil Tests

No	Test Method	Test Procedure Title
1	ASTM C 136	Particle Analysis of Soils
2	ASTM D 422	Standard Test Method for Particle Size Analysis of Soils
3	ASTM D 558	Moisture- Density (Unit Weight) Relation of Soil-Cement Mixtures
4	ASTM D 698	Standard Test Method for Compaction Characteristics by Standard Effort
5	ASTM D 854	Standard Test Method for Specific Gravity of Soils by Water Pycnometer
6	ASTM D 1140	Standard Test Method for Amount of Material in Soils Finer than 75 mm (No. 200) Sieve
7	ASTM D 1556	Standard Test Method for Density & Unit Weight of Soils in Place by Sand-Cone Method
8	ASTM D 6938	In-Place Density and Water Content of Soil and Soil Aggregate by Nuclear Methods (Shallow Depth)
9	ASTM D 1557	Standard Test Method for Laboratory Compaction Characteristics by Modified Effort
10	ASTM D1883	CBR (California Bearing Ratio) of Laboratory Compacted Soils
11	ASTM D 2216	Standard Test Method for Laboratory Determination of Water(moisture) Content of Soil and Rock By Mass
12	ASTM D 2487	Standard Practice for Classification of Soils for Engineering Purpose (Unified Soil Classification System)
13	ASTM D 4318	Standard Test Methods Liquid & Plastic Limits & Plasticity Index
14	ASTM D 6951	Standard Test Method for Use of the Dynamic Cone Penetrometer in Shallow Pavement Applications
15	ASTM D2487	Classification of Soil and Aggregate Mixtures for Highway Construction Purposes

Table 2. List of Certified Aggregate (Fine and Coarse) Tests

No	Test Method	Test Procedure Title
1	ASTM C 29	Standard Test Method for Unit Weight and Voids in Aggregate
2	ASTM C 88	Soundness of Aggregates by Use of Sodium Sulphate or Magnesium Sulphate Method
3	ASTM C 127	Standard Test Method for Specific Gravity & Absorption in Coarse Aggregate
4	ASTM C 128	Standard Test Method for Specific Gravity & Absorption in Fine Aggregate
5	ASTM C 117	Standard Test Method for Material Finer than 75 µm (No. 200) Sieve
6	ASTM C 535	Standard Test Method for Resistance to Degradation of Large-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
7	ASTM C 131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
8	ASTM C 136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
9	ASTM C 142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
10	ASTM C 702	Standard Practice for Reducing Samples to Testing Size
11	ASTM D 2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate

No	Test Method	Test Procedure Title
12	ASTM D 5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
13	CRD-C 171	Standard Test Method for Determining the Percentage of Crushed Particles in Aggregate

Table 3. List of Certified Cement, Grout, Mortar, & Concrete Tests

No	Test Method	Test Procedure Title
1	ASTM C 109	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in or [50-mm] Cube Specimens)
2	ASTM C 184	Standard Test Method for Fineness of Hydraulic Cement by # 100 and # 200 Sieve
3	ASCTM C 187	Standard Test Method for Amount of Water Required for Normal Consistency of Hydraulic Cement Paste
4	ASTM C 188	Density of Hydraulic Cement
5	ASCTM C 191	Standard Test Method for Time Setting of Hydraulic Cement by Vicat Needle
6	ASTM C 204	Standard Test Methods for Fineness of Hydraulic Cement by Air- Permeability Apparatus
7	ASTM C 451	Standard Test Method for Early Stiffening of Hydraulic Cement(Paste Method)
8	ASTM C 189	Soundness of Portland Cement
9	ASTM C 31	Standard Practice for Making and Curing Concrete Specimens in the Field
10	ASTM C 1019	Standard Test Method for Sampling and Testing Grout
11	ASTM C 39	Standard Test Method for Compressive Strength of Cylindrical
12	ASTM C 42	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete
13	AST M C 78	Flexural Strength of Concrete
14	ASTM C 143	Standard Test Method for Slump of Hydraulic-Cement Concrete
15	ASTM C 172	Standard Practice for Sampling Freshly Mixed Concrete
16	ASTM C 192	Standard Practice for Making and Curing Test Specimens in Laboratory
17	ASTM C 231	Standard Test Methods for Air Content of Freshly Mixed Concrete by the Pressure Method
18	ASTM C 511	Standard Specification for Mixing Rooms, Moist Cabinets, Moist Rooms, and Water Storage Tanks Used in the Testing of Hydraulic Cements and Concretes
19	ASTM C 617	Standard Practice for Capping Cylindrical Specimens
20	ASTM C 805	Standard Test Method for Rebound Number of Hardened Concrete
21	ASTM C 1064	Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete

Table 4. List of Certified Asphalt Cement and Asphalt Concrete Tests

No	Test Method	Test Procedure Title
1	ASTM D 5	Standard Test Method for Penetration of Bituminous Materials
2	ASTM D 36	Standard Test Method for Softening Point
3	ASTM D 70	Standard Test Method for Density of Semi-Solid of Bituminous Materials
4	ASTM D 92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
5	ASTM D 113	Standard Test Method for Ductility of bituminous Materials
6	ASTM D 140	Standard Practice for Sampling Bituminous Materials
7	ASTM D 979	Standard Practice for Sampling Bituminous Paving Mixtures
8	ASTM D 2041	Standard Test Method for Theoretical Maximum Specific Gravity & Density (Rice)
9	ASTM D 2042	Solubility of Asphalt Materials in Trichloroethylene
10	ASTM D 2172	Standard Test Methods for Quantitative Extraction
11	ASTM D 2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
12	ASTM D 3549	Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixtures Specimens
13	ASTM D 5361	Standard Practice for Sampling Compacted Bituminous Mixtures for Laboratory Testing
14	ASTM D 5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
15	ASTM D 6926	Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus
16	ASTM D 6927	Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures
17	ASTM D 1664	Coating and Stripping of Bituminous Aggregate Mixtures
18	CRD-C 650	Standard Method for Density and Percent Voids of Compacted Bituminous Paving Mixtures
19	CRD-C 652	Standard Test Method for Measurement of Reduction in Marshal Stability of Bituminous Paving Mixtures Caused by Immersion in Water
20	AASHTO T 230	Determining Degree of Pavement Compaction of Bituminous Aggregate Mixtures
21	ASTM D 4867	Effect of Moisture on Asphalt Concrete Paving Mixtures (TSR)

Table 5. List of Certified Bricks & Masonry Units Tests

No	Test Method	Test Procedure Title
1	ASTM C 67	Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile
2	ASTM C 140	Standard Test Methods for Sampling and Testing Concrete Masonry and Related Units
3	ASTM C 170	Standard Test Method for Compressive Strength of Dimension Stone
4	ASTM C 1019	Compressive Strength of Grout for Masonry
5	ASTM C 1552	Standard Practice for Capping CMU/Related Units/Masonry Prisms for Compression Testing

Table 6. List of Certified Advance Soil Tests

No	Test Method	Test Procedure Title
1	ASTM D 2435	Standard Test Methods for One-Dimensional Consolidation Properties of Soil Using Incremental Loading
2	ASTM D 5333	Standard Test Method for Measurement of Collapse Potential of Soils.
3	ASTM D 2166	Unconfined Compressive Strength of Cohesive Soil.

Table 7. List of Certified Steel Tests

No	Test Method	Test Procedure Title
1	ASTM A 325	Structural Bolts, Steel, Heat Treated 830 MPa Minimum
2	ASTM F 1554	Structure Anchor bolts tension and yield test
3	ASTM A 370	Standard Test Methods and Definition for Mechanical Testing for Steel Products
4	ASTM A 615	Standard Specification for Deformed and Plain Carbon- Steel Bars for Concrete Reinforcement
5	ASTM A 709	Carbon and High Strength Low-Alloy Structural Steel Shapes, Plates, and Bars and Quenched -and-Tempered Alloy Structural Steel Plates
6	BS 443	Gabion Wire Zinc Coating & Tensile Tests
7	AASHTO T 285	Standard Method of Tests for Bend Test of Bars for Concrete Reinforcement